Honeywell

HD4 EQUIP® Series True Day/Night Rugged IP Network Camera

NTSC / PAL

HD4MDIP HD4MDIPX

User Guide

Document 800-07091V2 – Rev A – 09/11

User Guide

Revisions

Issue	Date	Revisions
A	09/11	New document for HD4 EQUIP Series IP Dome Cameras that replaces 800-07091V1. Added instructions for using rubber washers with the mounting screws. Added a note advising that the housing is intended for mounting on a flat surface only. Added a note advising that antivirus software should be disabled before installing the IP Utility software. Added an illustration showing how to hold the dome bubble in front of the lens for lens adjustment. Also added the information for installing the Honeywell IP Utility on Windows 7. And added Frame Rate to the list of available priority settings in the Compression Settings section.

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About This Document

This document introduces the Honeywell HD4 EQUIP Series IP Dome Cameras. It covers how to install and operate the HD4 series cameras in a network environment.

This document is intended for system installers, administrators, and operators.

Overview of Contents

This document contains the following chapters and appendixes:

- *Chapter 1, Introduction*, introduces your Honeywell HD4 EQUIP Series IP Dome Camera, and gives a functional overview of its components.
- *Chapter 2, Installation and Setup*, provides procedures for installing cameras, lens adjustment, and setting up a network camera environment.
- *Chapter 3, Installing the Honeywell IP Utility and the Web Client Software*, describes how to install the Honeywell IP Utility and web client software.
- *Chapter 4, IP Camera Web Client*, describes how the web client application is used to view video and configure the available settings for your camera.
- *Appendix A, Troubleshooting*, lists common problems encountered when setting up your camera.
- *Appendix B, Specifications*, provides specifications for your camera.
- *Appendix C, Glossary*, is a handy reference for acronyms used in this guide.
- The *Index* provides quick access to commonly searched terms.

Cautions and Warnings

CAUTION **RISK OF ELECTRIC SHOCK DO NOT OPEN**	**THIS SYMBOL INDICATES THAT DANGEROUS VOLTAGE CONSTITUTING A RISK OF ELECTRIC SHOCK IS PRESENT WITHIN THE UNIT.**
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.	**THIS SYMBOL INDICATES THAT IMPORTANT OPERATING AND MAINTENANCE INSTRUCTIONS ACCOMPANY THIS UNIT.**

Installation and servicing should be performed only by qualified and experienced technicians to conform to all local codes and to maintain your warranty.

WARNING! **24V AC models require the use of CSA Certified/UL Listed Class 2 power adapters to ensure compliance with electrical safety standards. Power over Ethernet (PoE) should meet the IEEE 802.3 af PoE standard.**

WEEE (Waste Electrical and Electronic Equipment). Correct disposal of this product (applicable in the European Union and other European countries with separate collection systems). This product should be disposed of, at the end of its useful life, as per applicable local laws, regulations, and procedures.

Caution When powering the camera from 24V AC, a UPS source should be considered to ensure satisfactory performance.

FCC Compliance Statement

Information to the User: This equipment has been tested and found to comply with the limits for a Class A digital device. Pursuant to Part 15 of the FCC Rules, these limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Caution Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This Class A digital apparatus complies with Canadian ICES-003.

Manufacturer's Declaration of Conformance

North America

The equipment supplied with this guide conforms to UL 60950-1 and CSA C22.2 No. 60950-1.

Europe

The manufacturer declares that the equipment supplied with this guide is compliant with the essential protection requirements of the EMC directive 2004/108/EC and the General Product Safety Directive 2001/95/EC, conforming to the requirements of standards EN 55022 for emissions, EN 50130-4 for immunity, and EN 60950-1 for Electrical Equipment safety.

WARNING! **This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.**

Warranty and Service

Subject to the terms and conditions listed on the Product warranty, during the warranty period Honeywell will repair or replace, at its sole option, free of charge, any defective products returned prepaid.

In the event you have a problem with any Honeywell product, please call Customer Service at 1.800.796.CCTV for assistance or to request a **Return Merchandise Authorization (RMA)** number.

Be sure to have the model number, serial number, and the nature of the problem available for the technical service representative.

Prior authorization must be obtained for all returns, exchanges, or credits. **Items shipped to Honeywell without a clearly identified Return Merchandise Authorization (RMA) number may be refused.**

1

Introduction

The Honeywell HD4 EQUIP Series IP Dome cameras provide high quality color video surveillance over a network connection. The HD4MDIP/X camera support 720p resolution. See *Table 1-1* for descriptions of the camera models.

Table 1-1 True Day/Night Rugged IP Network Camera Model Numbers

Model number	Description
HD4MDIP	True Day/Night 720p, 3.3 – 12.0 mm VFAI Lens NTSC
HD4MDIPX	True Day/Night 720p, 3.3 – 12.0 mm VFAI Lens PAL

Features

The Honeywell HD4 EQUIP Series IP Dome cameras feature:

- 720p (1280 x 720) resolution for the HD4MDIP/X models
- 1/4” color CMOS progressive scan sensor
- Moveable Infrared (IR) cut filter ensures excellent low light performance
- Camera Sabotage Detection
- Video Motion Detection
- MPEG-4 and MJPEG compression
- Dual digital video streams simultaneously, independently configurable
- Remote firmware updates
- Support of both Dynamic and Static IP address assignment
- Multiple levels of password protected remote access to prevent unauthorized users from altering system settings
- Advanced IP locator software to make system setup easy
- Web server for remote setup of camera video and network parameters
- 24V AC or PoE IEEE 802.3 af choice of power inputs
- Input and output alarm contacts support
- Bi-directional audio support
- Local video out – aim and focus

2

Installation and Setup

This chapter describes how to:

- Mount the camera
- Make the necessary connections
- Adjust the camera for the clearest image

Before You Begin

Before you install your Honeywell HD4 EQUIP Series True Day/Night Rugged IP Network dome camera:

- Please read this guide carefully. Keep this guide for future reference.
- Check www.honeywellvideo.com/products/cameras/index.html to find your camera, then download the latest manuals and software updates.

Unpack Everything

Check that the items received match those listed on the order form and packing slip. Your HD4 series camera packing box should include:

- One fully-assembled HD4 EQUIP Series True Day/Night Rugged IP Network dome camera
- One HD4 series camera hardware kit
- One bag containing mounting screws, and the green power and audio/alarm connectors
- One mounting template
- One product warranty
- One CD containing the software, and the Quick Install and User Guides

If any parts are missing or damaged, contact the dealer you purchased the camera from or call Honeywell Customer Service (see *Warranty and Service* on page *13*).

Equipment Required

The following tools might help you to complete the installation:

- Drill
- Screwdrivers
- Wire cutters

Overview of the Installation Procedure

Note Please familiarize yourself with the installation procedure and complete each step in the exact sequence given.

The initial installation of your HD4 series camera consists of the following steps:

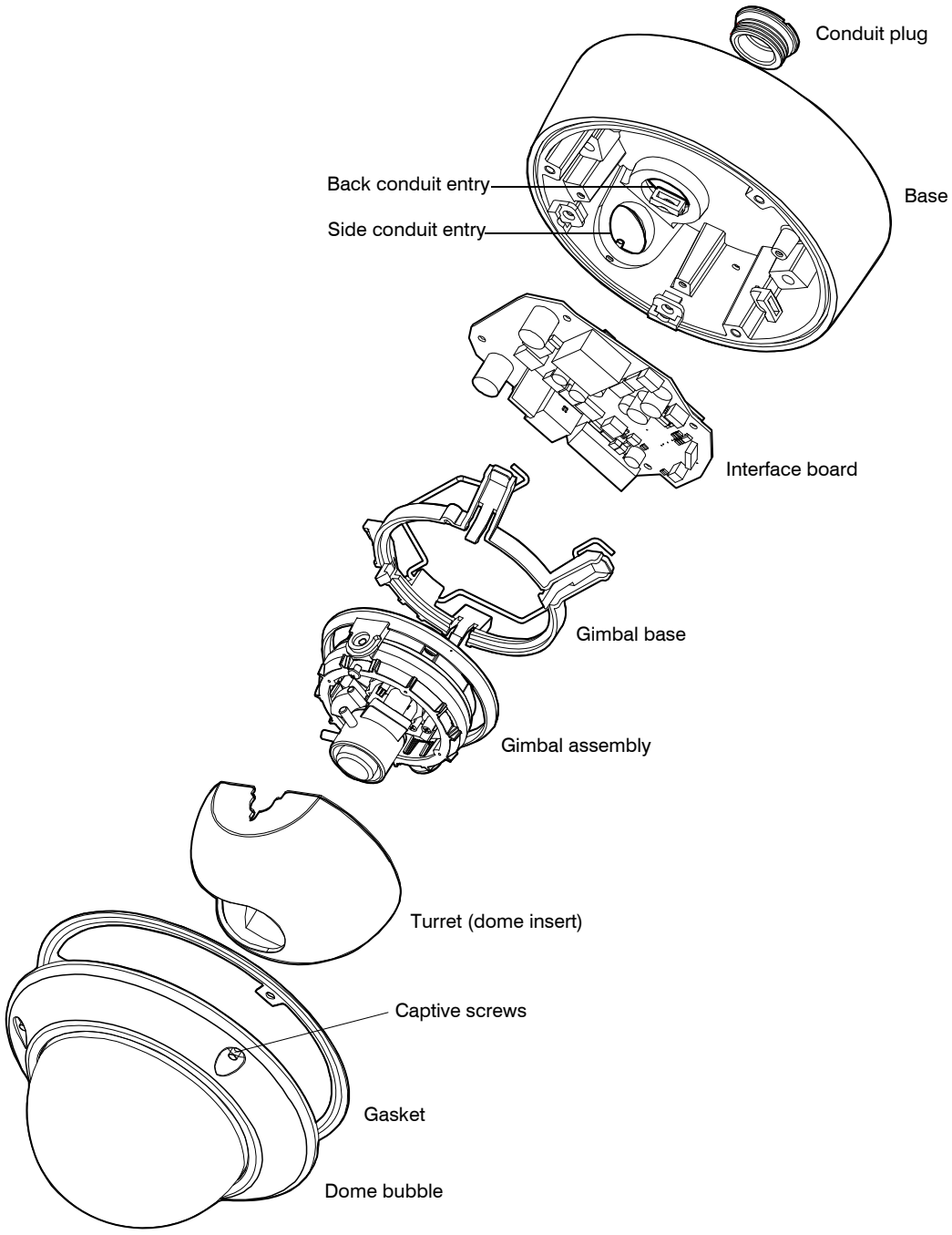
Table 2-1 Steps for Installing your Camera

	Step	See …
1	Remove the dome bubble and the turret.	*page 20*
2	Remove the gimbal.	*page 20*
3	Prepare the mounting surface.	*page 21*
4	Install the conduit plug.	*page 22*
5	Install the grommet (if required).	*page 22*
6	Mount the camera.	*page 23*
7	Connect the wiring.	*page 23*
8	Seal the wiring.	*page 27*
9	Adjust the camera.	*page 27*
10	Reinstall the dome bubble and turret.	*page 30*

Camera Components and Functions

Your HD4 series camera consists of a fully-integrated enclosure with camera and lens. The wiring can be completely concealed to reduce the risk of tampering.

Figure 2-1 HD4 Camera Components



Preparing for Camera Installation

Step1. Removing the Dome Bubble and Turret

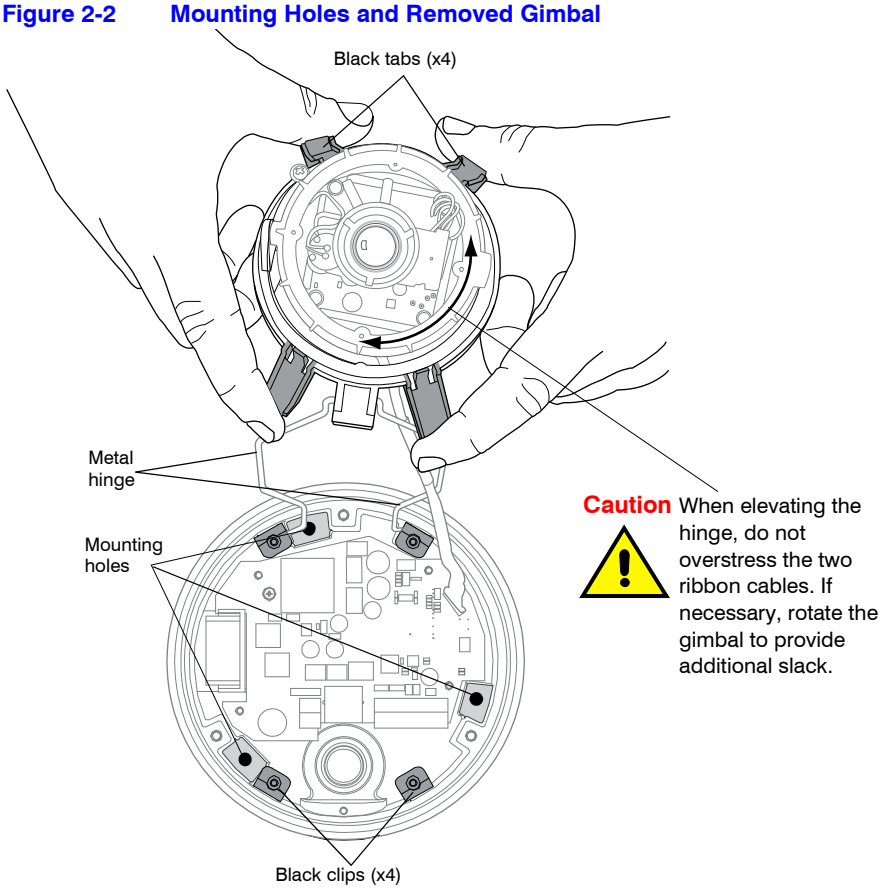
1. Using the supplied Allen key, loosen the captive screws on the dome bubble (see *Figure 2-1* on *page 19*). Remove the dome bubble and set it aside.
2. Gently pull the turret off the gimbal assembly, then set it aside.

Step 2. Removing the Gimbal

To gain better access to the mounting holes and the wiring board, remove the gimbal from the enclosure base.

1. Squeeze the 4 black tabs until they are free of the black clips.
2. Elevate the hinge until the gimbal is above the housing and you have access to the camera board connections and mounting holes.

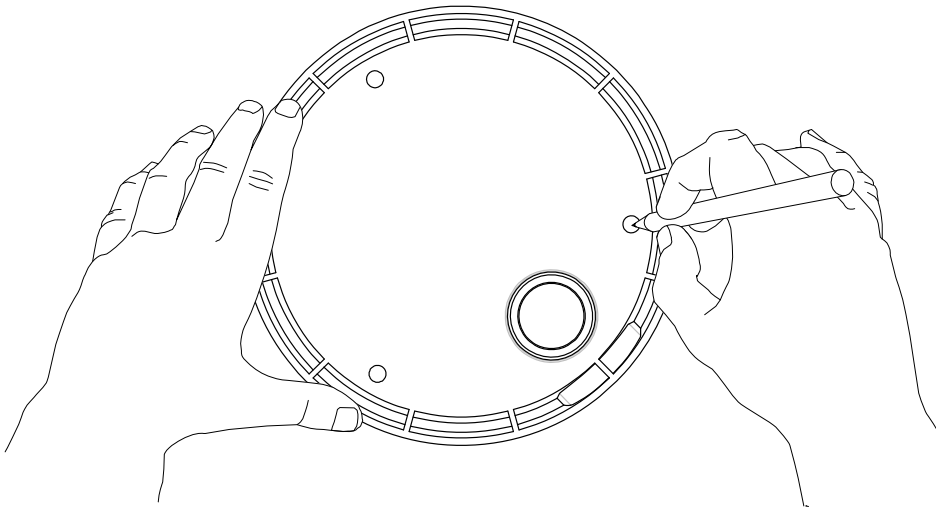
Figure 2-2 Mounting Holes and Removed Gimbal


Black tabs (x4)
Metal hinge
Mounting holes
Black clips (x4)
Caution When elevating the hinge, do not overstress the two ribbon cables. If necessary, rotate the gimbal to provide additional slack.

Step 3. Preparing the Mounting Surface

1. Affix the mounting template (supplied in the camera box) to the mounting surface or use the back of the camera base, as shown below, to trace the screw holes.

Figure 2-3 Tracing the Camera Base



Note To prevent moisture from entering the housing, position the enclosure with the side conduit entry pointing down if you are mounting the camera on a wall or other vertical surface.

Note The housing is intended for mounting on a flat surface.

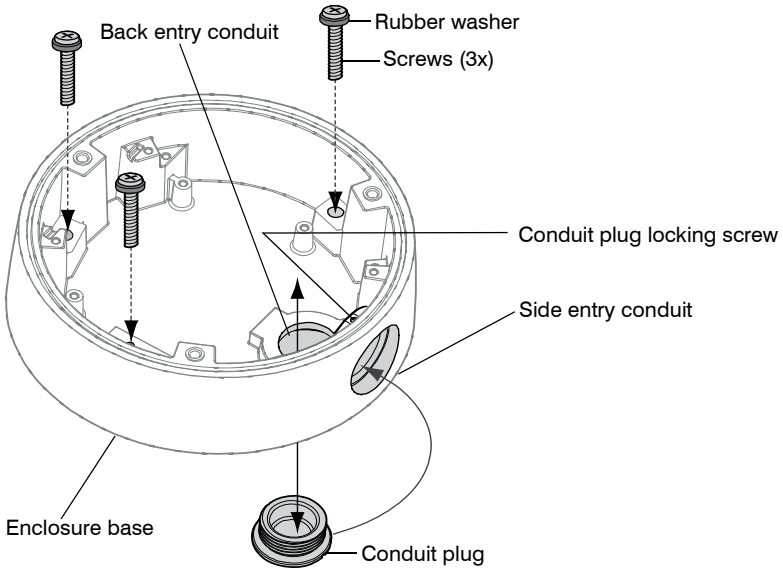
2. Pre-drill three holes as indicated on the template, using the recommended hole size for the screws being used.
3. Drill out the conduit hole, if required (see *Step 4. Installing the Conduit Plug*, page 22).

Note Alternate fasteners (preferably stainless steel) can be used, provided they are not larger than the screw holes on the mounting template.

Step 4. Installing the Conduit Plug

Your camera enclosure base comes with a conduit plug pre-installed in the 3/4 inch conduit entry on the back. To use the back conduit entry, remove the conduit plug and install it in the side conduit entry after loosening the locking screw (see *Figure 2-4*). Retighten the locking screw to secure the conduit plug in place.

Figure 2-4 Conduit Plug Installation



WARNING! **To minimize moisture leaking into the camera housing when mounting your camera on a vertical surface, position the enclosure with the side conduit entry pointing down. After feeding the cables through (see *Step 7. Connecting the Wiring*, page *23*), apply an appropriate sealant around the conduit connection.**

Step 5. Installing the Grommet (optional)

If a conduit is not used for cable routing, install the rubber grommet in the conduit hole (in the camera base), then slit the grommet and feed the cables through (see *Step 7. Connecting the Wiring*, page *23*). Use the appropriate sealant to seal the grommet to prevent moisture from entering the housing.

Installing the Camera

Step 6. Mounting the Camera

1. Pull the cables through the back conduit entry if that is the entry you are using.
2. Align the mounting holes in the base with the holes you have predrilled in the mounting surface, then secure the camera to a wall or ceiling using the supplied screws (see *Step 3. Preparing the Mounting Surface* on page *21*).

   If you are using screws other than those supplied by Honeywell, then please remove the rubber washers from the Honeywell-supplied screws, then install them under the head of each of your screws. See *Figure 2-4* on *page 22*.

Note To prevent moisture from entering the housing, ensure that the gasket is flush against the back of the camera enclosure and is not pinched.

Step 7. Connecting the Wiring

Caution When connecting to a power supply, use either a 24V AC power plug or use a PoE IEEE 802.3 af (Power over Ethernet) compatible hub. To avoid damage to the camera, never connect more than one type of power supply at the same time.

WARNING! **The use of a CSA Certified/UL Listed Class 2 power supply is required to ensure compliance with electrical safety standards.**

Note Check the power source from the external power supply before applying power to the camera.

Connect to Power Input

Caution When powering the camera from 24V AC, a UPS source should be used to ensure satisfactory performance.

Connect the power supply that is appropriate for your installation:

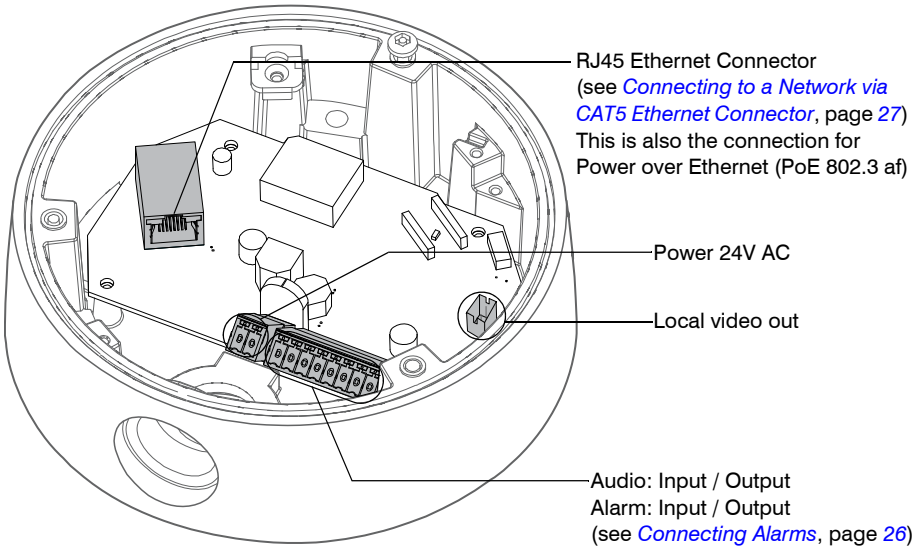
- 24V AC power supply
- Power over Ethernet (IEEE 802.3 af) 48V DC power supply

Note Connect power either from a 24V AC source or a CAT5 Ethernet connector (PoE). It is not recommended to connect both sources at the same time.

Note If you are using PoE (802.3 af), power will automatically be supplied to the camera through the network cable.

1. Connect to the power supply (see *Figure 2-5* on *page 24*). Locate the two-pin green connector that was shipped with your camera and make the necessary connections.
2. Plug the power supply into an appropriate power source. The LED on the RJ45 jack illuminates to show that the camera is receiving power. If it does not illuminate, check the terminal block connections and the power source.

Figure 2-5 Wiring Connections Shown on Board


RJ45 Ethernet Connector
(see Connecting to a Network via CAT5 Ethernet Connector, page 27)
This is also the connection for
Power over Ethernet (PoE 802.3 af)
Power 24V AC
Local video out
Audio: Input / Output
Alarm: Input / Output
(see Connecting Alarms, page 26)

Caution For secure installations, surface-mounted cables should be protected by plastic or metal cable covers.

Caution Installation must be performed by a qualified electrician. The power wire size for the distance and the number of cameras must be determined to maintain 24V AC at each camera.

Caution Connect power either from a 24V AC source or a CAT5 Ethernet connector (PoE); never both at the same time.

Connect Audio and Alarms

Locate the eight-pin green connector that was shipped with your camera and make all the necessary connections.

Figure 2-6 Audio and Alarm PINs

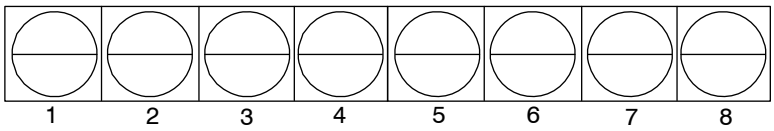


Table 2-2 Audio and Alarm Connector PIN Definitions

PIN	Definition
1	Audio In +
2	Audio In -
3	Audio Out +
4	Audio Out -
5	Alarm In +
6	Alarm In -
7	Alarm Out +
8	Alarm Out -

Connecting Audio

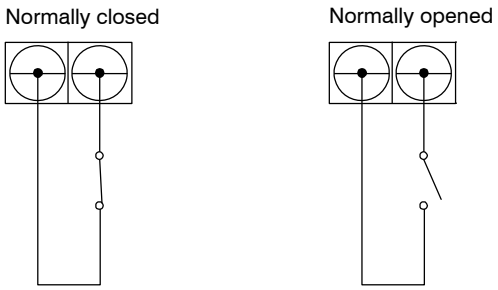
Your camera supports bi-directional audio. There are two supported voice band channels that function in full duplex mode. The camera can transmit audio from the camera to the client (PC) using any audio source that provides an industry standard line level input (see the terminal strip as depicted in *Figure 2-6*). The camera can also receive audio from the client (PC) and provide an industry standard line level output (3.5 mm stereo or mono jack) suitable to connect to audio devices. Audio input and output have 600 Ohm impedance. See *Audio Settings* on page *64* to configure audio options.

Connecting Alarms

WARNING! **Do not exceed the maximum rating of 12V DC, 0.5 A on alarm output connections.**

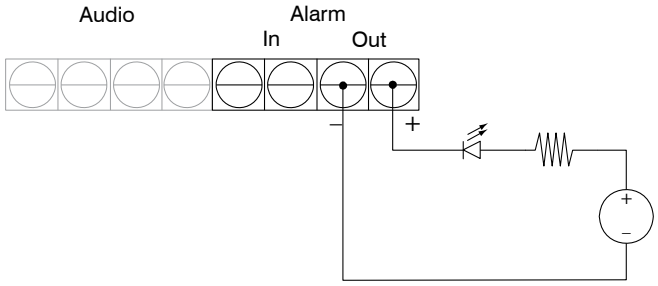
Your camera has one alarm input and one alarm output. Connect mechanical or electrical switches to the alarm input connection to allow event-triggered recording. When alarm inputs are configured, the camera triggers an alarm only when the normal alarm state (open or closed) changes (see *Figure 2-7*). See *Alarm Settings* on page *64* to configure the alarm inputs.

Figure 2-7 Normal Alarm States



Connect external devices such as sirens or flashing lights to the alarm output connector to signal users that an alarm is activated. See *Figure 2-8* for alarm connection.

Figure 2-8 Alarm Connection



The alarm output can be configured to provide normally open or normally closed contacts (see *Alarm Settings* on page *64* to configure the alarm output). Contacts will be rated for 12V DC @ 0.5 A.

Connecting to a Network via CAT5 Ethernet Connector

The main video connection for your camera is made through the Ethernet network connection. Connect the CAT5 Ethernet connector (see *Figure 2-5* on *page 24*) to your network using an Ethernet (10Base T, 100Base TX) cable.

Note You can connect your camera to a network or connect it directly to a PC or laptop using a crossover cable between the camera and the PC or laptop.

Step 8. Sealing the wiring

To prevent moisture from entering the housing, you should apply the appropriate sealant around the conduit entry and mounting screws.

Step 9. Adjusting the Camera

Connecting to a Video Monitor

The local video out connection (see *Figure 2-5* or *Figure 2-9*) is available as a test output and should be used during installation to position, aim, and focus the camera, as needed. Connect from the local video out connector on your camera to the video input connector on your spot monitor.

Adjust the FOV (Field of View)

To adjust the your camera:

1. Verify that power is supplied to the camera.

Note Please allow the camera to initialize before proceeding. Video output is not instantaneous with the application of power.

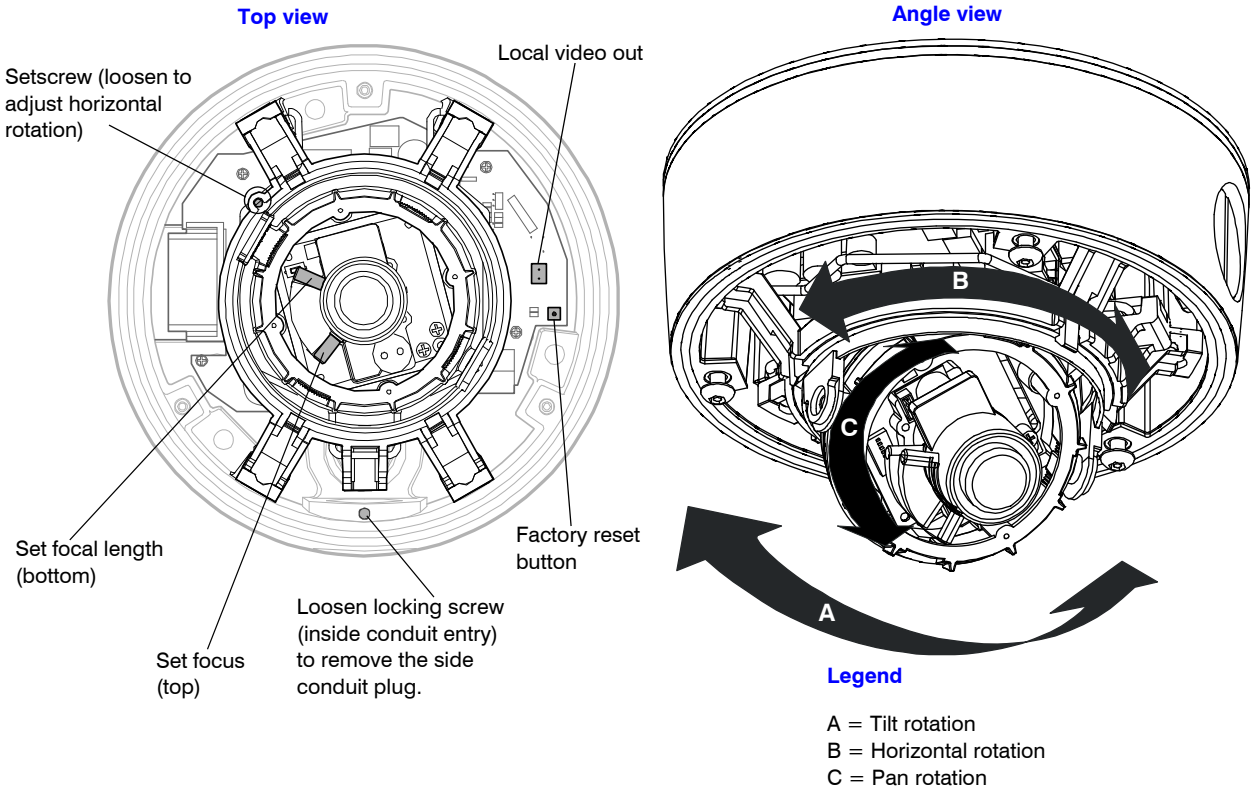
2. Reinstall the gimbal by inserting the black tabs into the black clips on the enclosure base.
3. Connect the supplied video cable to the local video out connector to view the video signal on a standard monitor (see *Figure 2-9* for the location of the local video out connector).
4. Loosen the setscrew that locks the gimbal assembly in place (see *Figure 2-9*) to adjust the horizontal rotation.

5. Adjust the camera gimbal to the desired view.
6. Re-tighten the locking screw to lock the gimbal assembly in place.

Note *Figure 2-9* illustrates the ways in which you can adjust your camera.

Caution Adjust the camera field of view only by moving the gimbal. Do not move the camera lens to adjust the camera field of view as this might result in irreparable damage.

Figure 2-9 Gimbal Adjustment

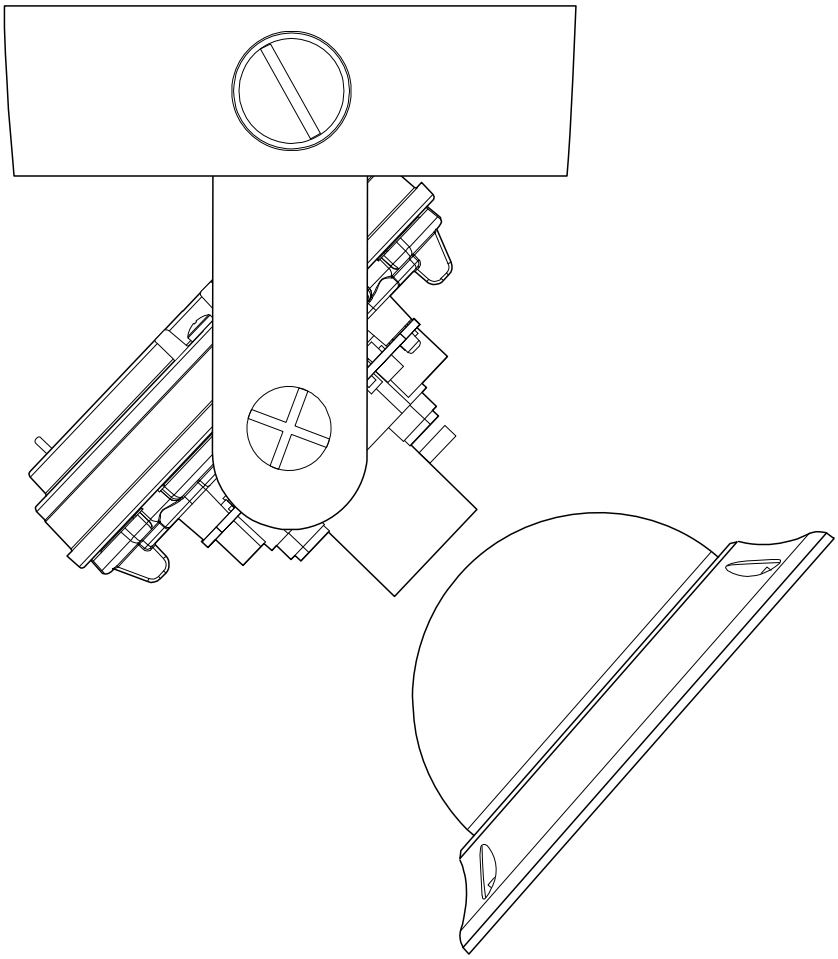


Adjusting the Lens Focus

Lenses are pre-focused at the factory. They might require a final adjustment after installation in the unlikely event the optical effect of the dome bubble causes a slight defocusing of the lens.

TECH TIP! To check the focus, hold the dome bubble over the lens while making any adjustments.

Figure 2-10 Holding the Dome Bubble Over the Lens



Restoring Factory Defaults

Your camera has a Factory Reset button located inside the camera (see *Figure 2-9*). Use this button to restore your camera options and passwords to their default settings. Use a pin or straightened paperclip to press and hold the Reset button for five seconds.

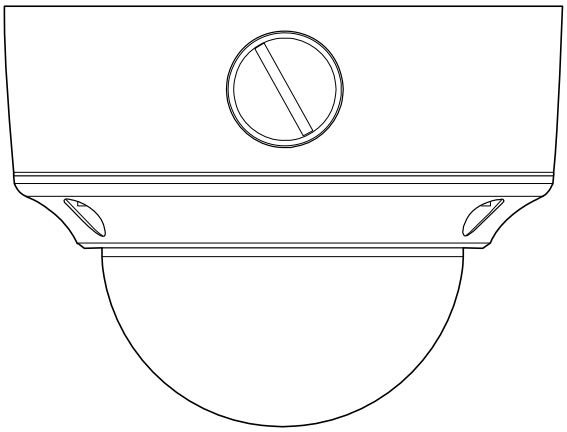
Completing the Installation

Step 10. Reinstalling the Turret and the Dome Bubble

When you have set up your camera and completed the network connections:

1. Align the turret on the gimbal assembly, then gently press the turret until in clicks securely into place.
2. Align the dome bubble captive screws with the mounting holes in the enclosure base, then securely screw them into place.

Figure 2-11 Reassembled HD4 EQUIP Series Dome Camera



3

Installing the Honeywell IP Utility and the Web Client Software

This chapter describes how to:

- Install and log onto the IP Utility
- Connect to a device and configure network settings using the IP Utility
- Launch the web client software
- Uninstall the IP Utility, Bonjour, or ActiveX software

About the Honeywell IP Utility and Web Client

About the Honeywell IP Utility

The Honeywell IP Utility is a software application that is installed from a CD or downloaded from the Honeywell Security Group website (go to www.honeywellvideo.com/products/cameras/index.html and look under Indoor/Outdoor Mini-domes to find your camera, then download the latest software updates). It is installed on a local workstation and primarily used by Administrators to configure the EQUIP Series of products residing on an IP network.

The IP Utility enables users to:

- Discover device(s) on a network
- Configure the IP network settings, name device(s), upgrade firmware, change passwords.
- Open individual web client applications for each discovered device.

Note Before installing and using the Honeywell IP Utility, confirm that your HD4 series camera is connected to the network through an Ethernet cable (see *Connecting to a Network via CAT5 Ethernet Connector* on page 27).

About the Web Client

The web client is the web-based application that enables users to:

- View live-streaming video
- View the device network settings and firmware details
- Configure camera settings
- Configure video analytics settings
- Configure compression settings
- Configure alarm and audio settings

User Profiles: Honeywell IP Utility and Web Client

Both the Honeywell IP Utility and the web client have two user types: *Administrator* and *Guest,* as described in *Table 3-1*.

Note Up to four (4) Administrators and/or Users can log on at the same time.

After the IP Utility software is installed, you can change the Administrator or Guest passwords.

Table 3-1 User Profiles for Honeywell IP Utility and the Web Client

Interface	Administrator	Guest
Honeywell IP Utility	• View the list of available network devices and connect to the devices. • Configure the IP network settings. • Upgrade firmware. • Change the access passwords for the IP Utility application. • Change the access passwords for the web client application.	• View the list of devices available on the network. • View system settings including device name, IP address, and MAC address.
Web Client	• View video and network settings. • Configure compression settings. • Configure camera setup. • Configure video analytics. • Configure audio and alarm settings.	• Guest users are limited to the Live View tab, where they can choose to view video from the primary or secondary streams.

Step 1: Confirm Your System Requirements

Note Windows administrator privileges are required to install the Honeywell IP Utility and associated software.

Note Contact the network administrator if there are any questions regarding the local area network (LAN) or any other network-related issues.

Install the Honeywell IP Utility on a work station with the minimum requirements (outlined in *Table 3-2*). After the IP Utility is installed, the same computer workstation can be used to access the web client.

Table 3-2 PC Minimum System Requirements

Component	Requirement
Operating System	Windows XP® or WINServer 2003
Processor	Intel® Pentium® IV, 3.1 GHz or faster
RAM	1 GB RAM or higher

Table 3-3 Items Installed On Your System

Item	Function
Honeywell IP Utility software	To enable use of the web client to configure cameras and view live video.
Bonjour software	To enable the devices to discover cameras on the network.
Honeywell HD4 IP Adapter software	Required if a workstation does not have IP Utility installed but an operator is using the web client.
Honeywell HD4 ActiveX software	To enable live streaming of video on the web client.
EQUIP™ Series User Guides	To provide detailed information about how to install and configure your EQUIP Series products.

Step 2: Install the Honeywell IP Utility Software

1. Close all other applications that might be open on your computer.

Note We recommend that you disable any Norton AntiVirus software that might be running on the workstation.

2. Open the **Honeywell IP Utility InstallShield Wizard**.

   Method 1: CD
   - Insert the CD into the CD-ROM drive.

Note If InstallShield does not open automatically, navigate to [***CD drive***]**\Honeywell IP Utility\Honeywell IP Utility Setup.exe.** Double-click on the file to launch the program.

   Method 2: Website

   a. Navigate to **www.honeywellvideo.com.**

   b. Click **Customer Resources** ▶ **Download Center** ▶ **I Agree** to reach the software downloads page.

   c. Locate your device in the list (for example, click **Cameras** for HD4 series IP devices).

   d. Under Honeywell IP Utility, download, extract and open the **Honeywell IP Utility Set-up.exe** icon from where you extracted the file.

3. When the **Honeywell IP Utility InstallShield Wizard** opens, follow the instructions. After the installation is complete, a **Honeywell IP Utility** icon displays on the desktop.

Installing the Honeywell IP Utility Software with Windows 7

Before installing the Honeywell IP Utility on a computer that runs on Windows 7, you should confirm that the following conditions have been met.

Enable Microsoft .NET Framework 3.5 on Your Workstation

Although Microsoft .NET Framework 3.5 is pre-installed on Windows 7, you might have to confirm that it is also enabled on your workstation.

1. Go to **Start** ▶ **Control Panel** ▶ **Programs** ▶ **Programs and Features**.
2. Click the check box beside**Microsoft .NET Framework 3.5** to enable it.

3. Click **OK** to save the new setting.

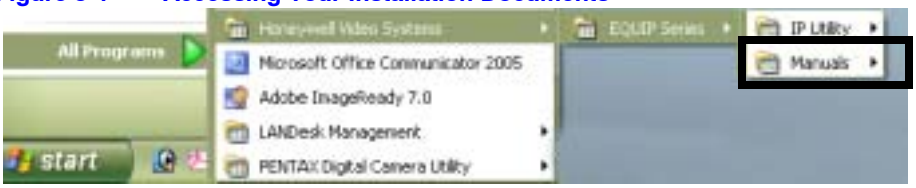
Disable User Account Control (UAC) Settings

1. Go to **Getting Started** ▶ **Change UAC Setting**.
2. Change the UAC setting to **Never Notify**.
3. Click **OK** to save the new setting.

Downloading the EQUIP Series Installation Guides

1. To access the installation documents that were installed with the IP Utility, click **Start** ▶ **All Programs** ▶ **Honeywell Video Systems** ▶ **EQUIP Series** ▶ **Manuals** ▶
2. Select the applicable PDF to download to your computer.

Figure 3-1 Accessing Your Installation Documents



Step 3: Log Onto the IP Utility and Discover Network Devices

1. Double-click the **Honeywell IP Utility** icon on your desktop.
   -OR-
   Click **Start** ▶ **Programs** ▶ **Honeywell Video Systems** ▶ **EQUIP Series** ▶ **IP Utility** ▶ **Honeywell IP Utility**.
   The **Honeywell IP Utility Log On** window opens.

Figure 3-2 Honeywell IP Utility Log On Window

2. Select **Administrator** or **Guest** from the **User Name** drop-down list.

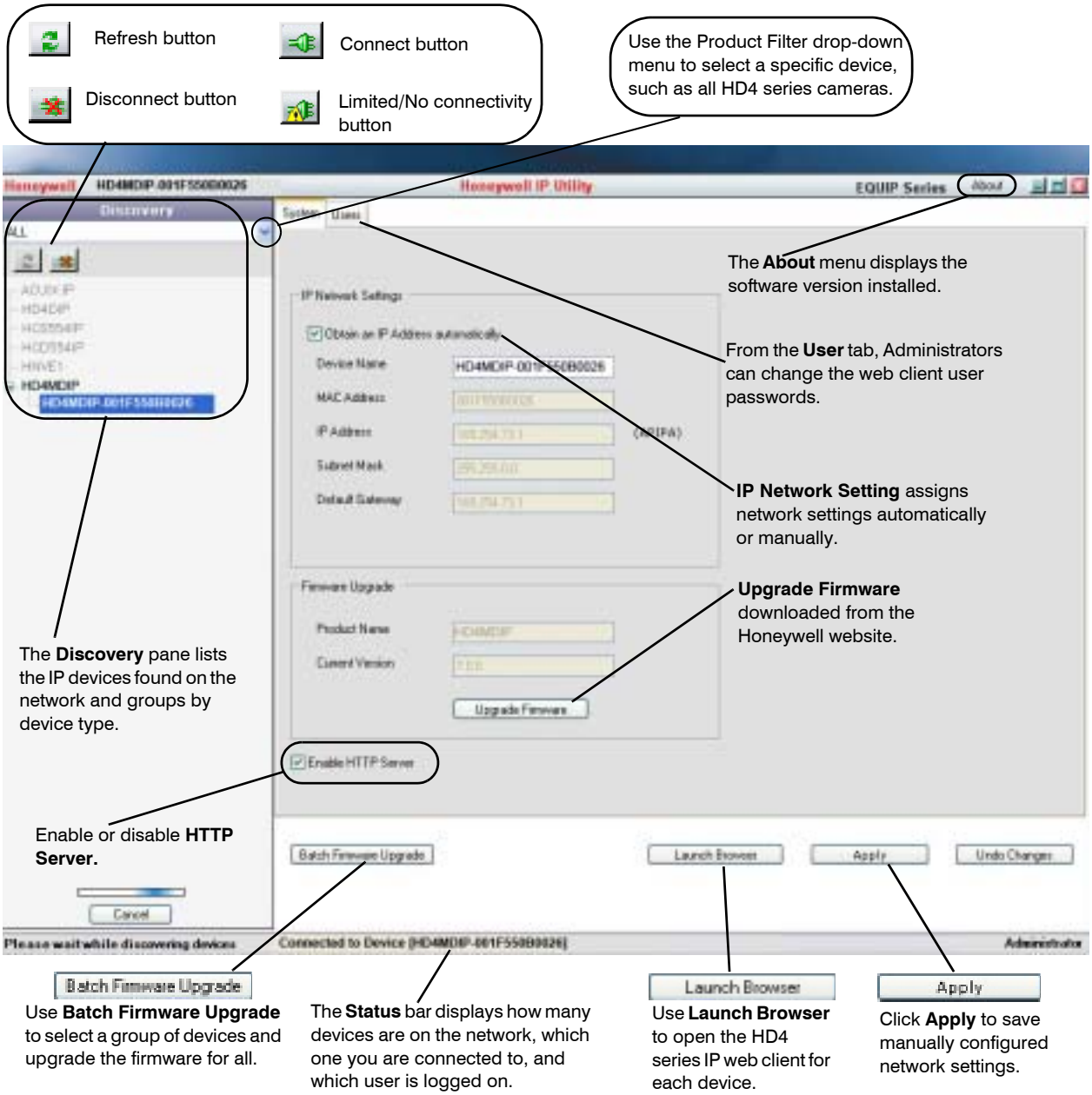
3. Enter the case-sensitive password in the **Password** field.
   - The default Administrator password is **1234.**
   - The default Guest password is **guest.**

Note During the installation set up, you must log on as an Administrator to access all the features.

4. Click the arrow button .
   The **Honeywell IP Utility** program searches for devices on the network and opens to the Honeywell IP Utility user interface.
5. Automatically discover or manually refresh the list of devices on the network.
   Use the manual refresh if a new device was added after you logged onto the system.
   - You do not need to do anything to discover devices. When you log on to the IP Utility, the devices on the network — including the devices on other subnets — are automatically discovered and listed in the Discovery pane. After the initial discovery, the network automatically continues to discover devices that are newly added to the network.
   - To manually refresh the device list, click the **Refresh** ( ) button, located near the top of the Discovery pane.
6. Enable or disable the **HTTP Server** checkbox for additional security. Only an Administrator can disable (uncheck the box) the HTTP server, blocking user access to the web client. Disabling the HTTP server does not affect video recording.

Note The examples in this User Guide show a connection to an HD4MDIP camera.

Figure 3-3 Honeywell IP Utility User Interface


Refresh button
Connect button
Disconnect button
Limited/No connectivity button
Use the Product Filter drop-down menu to select a specific device, such as all HD4 series cameras.
Honeywell IP Utility
EQUIP Series
About
Discovery
IP Network Settings
Device Name
MAC Address
IP Address
Subnet Mask
Default Gateway
Firmware Upgrade
Product Name
Current Version
Upgrade Firmware
Enable HTTP Server
Batch Firmware Upgrade
Launch Browser
Apply
Undo Changes
Cancel
Please wait while discovering devices
Connected to Device [HD4MDIP-001F550B0026]
Administrator
The About menu displays the software version installed.
From the User tab, Administrators can change the web client user passwords.
IP Network Setting assigns network settings automatically or manually.
Upgrade Firmware downloaded from the Honeywell website.
The Discovery pane lists the IP devices found on the network and groups by device type.
Enable or disable HTTP Server.
Batch Firmware Upgrade
Use Batch Firmware Upgrade to select a group of devices and upgrade the firmware for all.
The Status bar displays how many devices are on the network, which one you are connected to, and which user is logged on.
Launch Browser
Use Launch Browser to open the HD4 series IP web client for each device.
Apply
Click Apply to save manually configured network settings.

Step 4: Connect to a Device and Configure Network Settings

When you log on to the IP Utility, the devices on the network—including the devices on other subnets—are automatically discovered and are listed in the **Discovery** pane. After the initial discovery, auto-refresh continues to discover devices that are newly added to the network.

You can also manually refresh the device discovery by clicking the **Discovery** icon ( ), located near the top of the Discovery pane.

Connecting to or Disconnecting from Devices

Before configuring the IP network settings, you must connect to the IP device.

Connecting to a Device

You can connect to individual web client applications for each discovered device.

- In the **Discovery** pane, double-click the device to which you want to connect.

  -OR-

- Select the device, then click the **Connect** button.
  The network settings for the connected device display in the **System** pane.

Disconnecting from a Device

In the **Discovery** pane, select the device, then click **Disconnect** .

Note If you disconnect the device without saving configuration details, a warning dialog box displays. Click **Yes** to save and disconnect, or click **Cancel** to discard the changes and disconnect the device.

Configuring the IP Network Settings Automatically or Manually

Note When you see the **Limited/No connectivity** button, you cannot fully connect to the device because the discovered device is on a different subnet from your PC. Check your network settings for both the device and your PC to resolve this issue. Consult your network administrator for additional support.

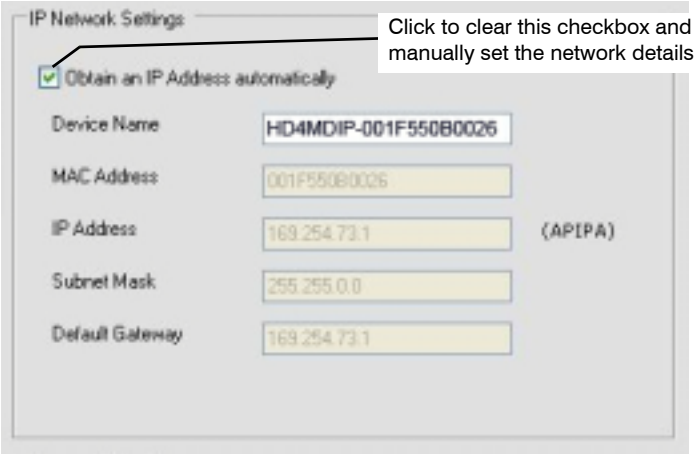
The IP network setting details, such as device name, IP address, and subnet mask can be configured for each connected device either automatically or manually.

Note It is important to click **Apply** to save any configuration change.

Table 3-4 IP Network Device Setting Options

Option	Description
Device Name	By default, the device name is the device type plus the MAC Address. Honeywell recommends, for security, that you change the device name.
IP Address	The IP address of the device on the network. The camera obtains an IP address by static or dynamic (automatic) means. There are two options: DHCP (dynamic), assigned by the user, or APIPA (static), assigned by the network.
Subnet Mask	The subnet mask, or netmask, value of the device on the network. IP networks can be divided into several smaller networks by subnetting. When a network is subnetted, you must specify a subnet mask, which tells network devices which smaller network they belong to. **Note** If the subnet mask is not properly configured, the camera might not be able to communicate with other devices on the network.
Default Gateway	The default gateway address that connects the device to the network. Enter the IP address of the host to use as a gateway between networks. The gateway allows communication between devices that are on different networks. Without a correct gateway setting, the camera cannot receive or transmit data from or to devices that are not in the same network address range.
MAC Address	The MAC address is a factory-assigned address that is unique for each device.

Figure 3-4 Set the IP Network Settings Automatically or Manually



Updating IP Network Settings Automatically

1. In the **Discovery** pane, select the device and click **Connect** .
2. From the **System** tab click the **Obtain an IP Address automatically** check box.
3. Enter a **Device Name,** for example, *FrontLobbyDome01*.
4. Click **Apply**.
   The network automatically assigns the IP Address based on the DHCP network server details. **If no DHCP server is present on the network, the hardware defaults to an APIPA address (169.254.x.x).**

Updating IP Network Settings Manually

Caution When manually updating the network settings, it is important to enter the correct IP network settings before applying them. Incorrect values might cause a failure when connecting to the device. See *Table 3-4* for definitions of each setting.

1. In the **Discovery** pane, select the device, and click **Connect** .
2. To assign a static IP address for the device, in the **System** tab click to clear the **Obtain an IP Address automatically** check box.
3. Enter a **Device Name**, for example, *FrontLobby01*.

Note The MAC address is a factory-assigned address that is unique for each device.

4. Enter an **IP Address** of the device on the network.

Note The address must be in the same address range. For example, if the PC is 192.188.1.xx, then the device should be set to a similar address, for example 192.168.1.xy.

5. Enter the device **Subnet Mask** value. A value is required.
6. Enter a default **Gateway Address** that connects the device to the static network. A value is required.
7. Click **Apply**.
   The network settings are updated and a message displays in the status bar to confirm the update.

Interfacing with the EQUIP Device Via a Network Video Recorder

Your recording vendor has the option of using either the connection methods supported by EQUIP V1 firmware or EQUIP V2.1 firmware. If the NVR vendor has implemented EQUIP V1 connection methods, your HD4 series camera will work on those NVRs. Similarly, if the NVR vendor has implemented EQUIP V2.1 connection methods, your HD4 series camera will work on those NVRs. There is no user configuration necessary.

For further information, refer to the documentation supplied with your NVR or contact your NVR network administrator.

Step 5: Launch the Web Client to View Live Video

Note Only one user, an Administrator or a Guest, can log on to the web client application at one time. After you are logged on as an Administrator, there is no time out until you click **Logout**. To allow other Administrators to log on, you must log out when the session is done.

Note After the IP Utility software is installed for the first time, you can change the Administrator or Guest passwords and upgrade the firmware.

Note It is important to click **Apply** to save any configuration change.

1. Log onto the web client. There are two ways to launch the web client and log on— via the Honeywell IP Utility program or directly from Internet Explorer.

   Honeywell IP Utility

   a. Log onto the Honeywell IP Utility program.

   b. From the **Discovery** pane, click to select the device and launch its browser.

   c. To enable or disable the HTTP server, select or clear the **Enable HTTP Server** check box. By default, the HTTP server is enabled.

   d. From the **System** tab, click **Launch Browser**.
   The web client application for the selected device opens in Internet Explorer.

   Internet Explorer

   From Internet Explorer (v6.0+), **enter the URL** (IP address of the device) in the Address bar to open the logon window.

2. Select a **User Name** and enter a **Password**.

   a. From the **User Name** drop-down list, select **Administrator** or **Guest**.

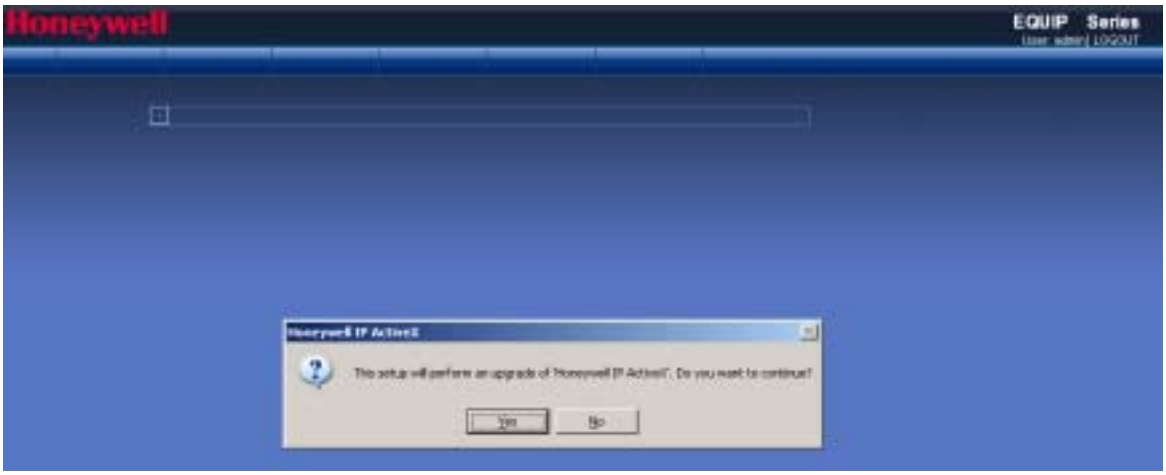
   b. In the **Password** field, enter the case-sensitive password.

      - The default Administrator password is **1234.**
      - The default Guest password is **guest.**

   c. Click .

3. A signed version of ActiveX® control is installed when you use the web client to discover connected devices for the first time. If you have a previous version of the IP ActiveX is installed, then you are prompted to upgrade the Honeywell secure ActiveX control.

Figure 3-5 ActiveX Prompt



   Click **Yes**.

4. Follow the InstallShield Wizard prompts to install the secure Honeywell IP ActiveX on your PC.

5. The `InstallShield Wizard Completed` message indicates a successful ActiveX upgrade. Click **Finish**.

   The web client interface opens and live streaming video displays on the monitor.

Figure 3-6 Web Client Interface After Logging On

Uninstalling IP Utility, Bonjour or the ActiveX Plug-in Software

You can uninstall the IP Utility, Bonjour, or IP ActiveX software using:

- The **Start** menu to uninstall the IP Utility and Bonjour

  OR

- The **Control Panel** to uninstall the IP Utility, Bonjour, and IP ActiveX.

Note You are prompted to uninstall Bonjour while uninstalling the IP Utility.

Uninstalling IP Utility Using the Start Menu

1. Click **Start** ▶ **All Programs** ▶ **Honeywell Video Systems** ▶ **EQUIP Series** ▶ **IP Utility** ▶ **Uninstall Honeywell IP Utility**.
2. Click **Yes**.
   The Honeywell IP Utility is uninstalled.
3. During the uninstallation process, you are prompted to also uninstall the Bonjour program. Click **Yes** to remove Bonjour or **No** to uninstall only the Honeywell IP Utility.
4. Click **Finish**.

Uninstalling IP Utility or IP ActiveX Using the Control Panel

1. Click **Start** ▶ **Settings** ▶ **Control Panel**.
2. Open **Add or Remove Programs** and select **Honeywell IP Utility** or **Honeywell IP ActiveX** from the **Currently installed** programs list.
3. Click **Change**/**Remove**.

   The **IP Utility Installation Wizard** screen opens.
4. Click **Next** ▶ **Remove**.

   The Honeywell IP Utility is uninstalled.
5. During the uninstallation process, you are prompted to also uninstall the Bonjour program. Click **Yes** to remove Bonjour or **No** to only uninstall the Honeywell IP Utility.
6. Click **Finish**.

4

IP Camera Web Client

Before you launch the Honeywell IP web client, ensure that you complete the following sections before configuring your HD4 series camera:

- *Chapter 2, Installation and Setup*
- *Chapter 3, Installing the Honeywell IP Utility and the Web Client Software*

This chapter covers:

- Navigating the web client interface
- Understanding the web client features and functions
- Configuring compression settings
- Configuring camera settings
- Setting tamper detection (camera sabotage and video motion detection)
- Configuring audio and alarm settings

Overview

The network camera web client is a web-based application that enables you to view video, listen to audio, and configure camera, sabotage detection, motion detection, alarm, and audio settings for the network camera.

Certain features of the IP Camera web client are user-based and are available only to the Administrator. The guest user is limited to the Live View tab. Only one user, an Administrator or a Guest, can be logged on at a time.

User Profiles

Table 4-1 describes the roles and privileges for the web client application users:

Table 4-1 User Roles and Privileges

User Role	Privileges
Administrator	• View video and network settings • Configure the alarm and audio settings • Set up the video compression settings • Configure auto exposure and white balance for the camera • Set up camera sabotage and video motion detection settings
Guest Operator	• View video

Logging On and Off the IP Web Client

Note Up to four (4) Administrators and/or Users can log on at the same time.

There are two ways to open each IP web client.

- By clicking **Launch Browser** from the IP Utility interface.
- By entering the URL (the IP address) in the address bar directly from Internet Explorer.

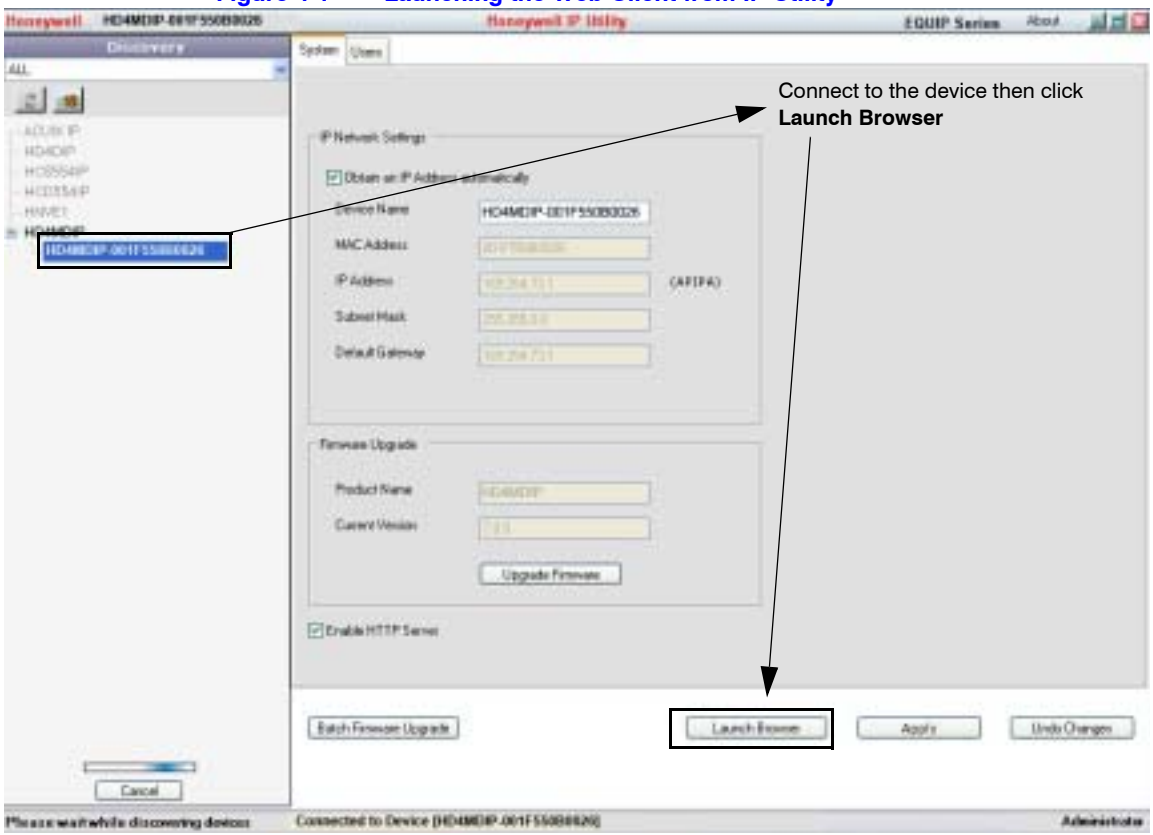
Note The web page where you log on to the Honeywell IP Utility and any IP device web page (for example, the IP web client) look very similar. You can tell the difference between the two sites by the IP address in the web browser as well as the program name in the lower left corner of the window.

Launching the Web Client from IP Utility

1. From the desktop, double-click the **Honeywell IP Utility** icon .
   -OR-
   Click **Start** ▶ **All Programs** ▶ **Honeywell Video Systems** ▶ **EQUIP Series** ▶ **IP Utility** ▶ **Honeywell IP Utility**.
   The **Honeywell IP Utility Log On** window opens.

2. From the **User Name** drop-down list, select **Administrator** or **Guest**.
   See *Table 4-1* on *page 46* for user roles and privileges.
3. In the **Password** field, enter the case-sensitive password. Only one user, an Administrator or a Guest, can be logged on at a time.
   - The default Administrator password is .
   - The default Guest password is .
4. Click .
   The **Honeywell IP Utility** program searches for devices on the network and opens to the Honeywell IP Utility user interface.
5. In the **Discovery** pane, double-click the device you want to connect to.
   -OR-
   Select the device and click **Connect** .
   The network settings for the connected device display in the **System** pane.
6. Click **Launch Browser**.

Figure 4-1 Launching the Web Client from IP Utility



The web client log on page opens. (See *Figure 4-2*.)

Note The examples in this document show a connection to an HD4MDIP/X camera.

Logging Onto the Web Client from Internet Explorer

1. From Internet Explorer (v6.0+), enter the URL (IP address of the device) in the Address bar to open the log on window.
   The **web client** log on page opens.

Figure 4-2 Web Client Logon Page

2. Select a **User Name** and enter a **Password**.
   a. From the **User Name** drop-down list, select **Administrator** or **Guest**.
   b. In the **Password** field, enter the case-sensitive password.
      - The default Administrator password is .
      - The default Guest password is .
   c. Click .
3. The web client interface opens and live streaming video displays on the monitor.

Logging Out of the Web Client

To log out from the web client application, click **Logout** at the top of the web client window (see *Figure 4-3* on *page 49*).

Note Do not use the **CLOSE** button ( ) in Internet Explorer to log out or the session might not end correctly, and the settings that have you changed might not be saved.

Navigating the User Interface

Figure 4-3 Web Client Window Layout: Administrator Log On

The **URL** corresponds to the IP Address as configured in the IP Utility.
Click **Logout** to exit the program. Go here to confirm the user type logged on.
HD4MDIP
If logged on as a **Guest**, only the **Live View** tab is available. Administrators can access all tabs.
Click the tabs to access the available configurations and settings.
The image from the camera displays on every tab.
Each tab has a section for configuration and/or navigation controls.

The web client application user interface consists of multiple user-friendly windows organized by function. Access to the windows is user-controlled.

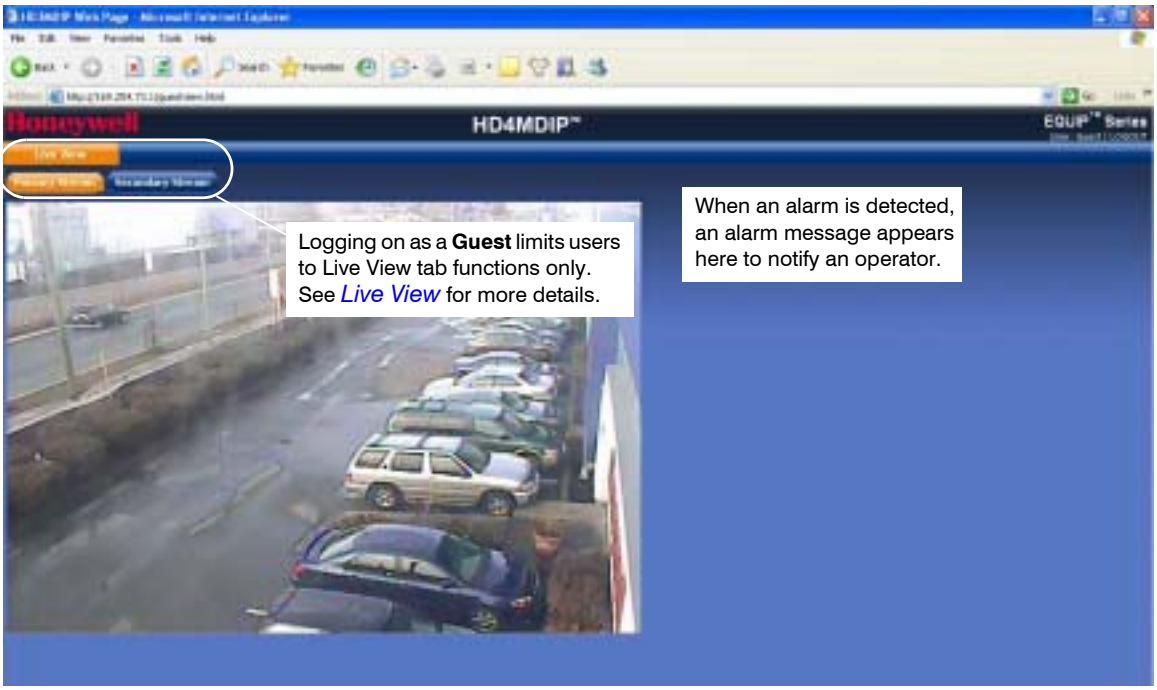
Table 4-2 Tabs in the Web Client Application

Tab	Enables you to...
Live View	View video.
Device Information	View the network settings and firmware details of the camera.
Compression Settings	Configure the compression. Set the maximum bit rate and/or target bit rate (based on priority mode settings) that the camera will provide across the network. This value is the threshold that you do not want the bit rate to exceed. View received bit rate and frame rate statistics of the current image in real time.
Camera Setup	Configure auto exposure and white balance for the camera.
Video Analytics	Configure the camera sabotage detection settings and how video displays.
Alarm and Audio	Configure the alarm and audio settings.

Figure 4-4 Web Client: Administrator User

HD4MDIP™
Click to select the video stream.
Click a **Tab** to display the corresponding view.
The **menu bar** displays which user is logged on and provides a link to log out of the application.
Screens are divided between displaying current video and the configuration options associated with the view.

Figure 4-5 Web Client: Guest User


HD4MDIP™
Logging on as a **Guest** limits users to Live View tab functions only. See *Live View* for more details.
When an alarm is detected, an alarm message appears here to notify an operator.

Live View

Live View shows live video from the selected camera (see *Figure 4-5*).

Device Settings

The Device Settings tab allows you to view the network settings and firmware details of the camera.

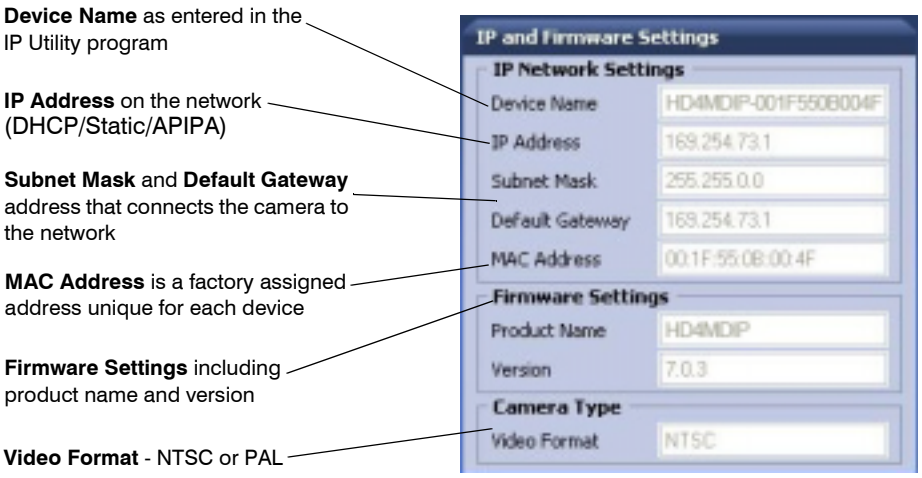
IP and Firmware Settings on the Device Information Tab

Depending on the hardware installation, there is a tab called either **Device Information** or **Device Settings**. In both cases, the IP and Firmware Settings panel mirrors the information available in the Honeywell IP Utility. It provides read-only network settings, firmware settings, and video formats without having to access the IP Utility.

The Device Settings are the same for the Primary and Secondary streams.

Figure 4-6 Device Settings

Figure 4-7 IP and Firmware Settings: Device Information Tab



Compression Settings

The video signal sent from the camera to the web client has a number of settings that can be edited which affect how the video displays in the web client. The Compression Settings view enables you to configure these settings:

- Stream Type
- Resolution
- Frame Rate
- Priority (**Quality** or **Bite Rate**)
- Compression Ratio (if **Quality** is chosen as the priority)
- Target Bit Rate (if **Bit Rate** is chosen as the priority)
- Maximum Bit Rate that the camera will provide across the network
- GOP (number of frames)

Figure 4-8 Compressions Settings Tab: Primary Stream

Your camera provides dual simultaneous video streams. Although the Primary stream can support a single MPEG4 SP in real time 30 fps at 720p resolution, it must be set to less than 720p for the second stream to operate. The Secondary stream operates at a lower frame rate than the Primary stream.

Video Codec Settings Tab

Figure 4-9 HD4MDIP/X Video Codec Settings Tab Available Functions

Primary Stream			Secondary Stream	
Primary Stream Video Codec Settings			**Secondary Stream Video Codec Settings**	
Stream Type	MPEG4		Stream Type	MJPEG
Resolution	1280x720	Set the **Resolution**	Resolution	640x360
Frame Rate	25	Set the **Frame Rate**	Frame Rate	15
Priority	Quality	Set the **Priority** to Quality, or Bit or Frame Rate	Priority	Quality
Compression Ratio	Medium	Set the **Compression Ratio**	Compression Ratio	Medium
Target Bit Rate (kbps)	N/A	Set the **Target Bit Rate**	Target Bit Rate (kbps)	N/A
Maximum Bit Rate (kbps)	4500	Set the **Maximum Bit Rate** (kbps)	Maximum Bit Rate (kbps)	3500
GOP (No. of Frames)	30	Set the **GOP** (Group of Pictures)		
Default settings shown			**Default settings shown**	

Configuring the Compression Settings

1. On the Compression Settings tab, in the **Statistics** area, click the **Received** check box to receive in real time the bit rate and frame rates for the current image. Deselecting the check box disables the refresh rate.

Note The **Received** check box is disabled by default. When you log out, this check box reverts to the disabled state.

2. Use *Table 4-4* to set up the streaming resolution and *Table 4-4* for the other compression settings.

Table 4-3 Video Streaming Resolutions

Camera	Primary Stream Resolutions	Secondary Stream Resolutions
HD4MDIP/X	1280 x 720 800 x 450 640 x 360 320 x 180	640 x 360 320 x 180

Table 4-4 Compression Settings

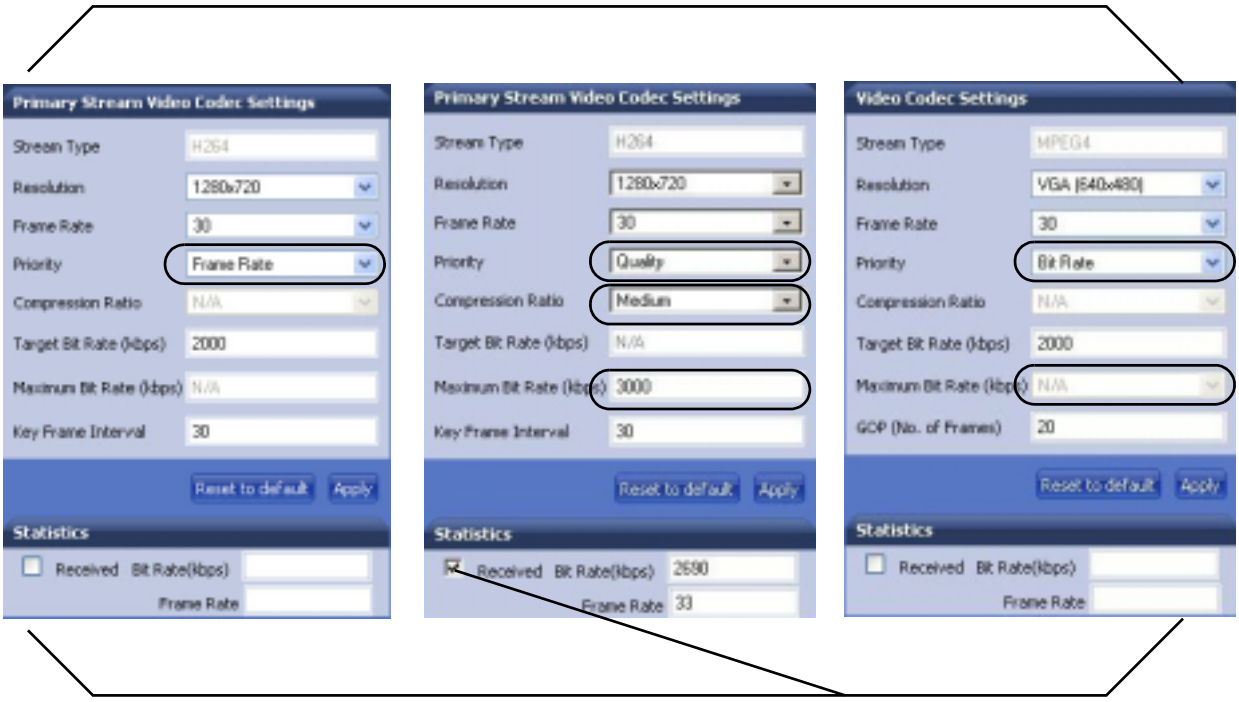
Setting	Options	Description
Frame Rate	1–30 (NTSC) 1–25 (PAL)	The frame rate that is displayed per second. For NTSC, select from **1** fps (lowest) to **30** fps (highest). For PAL, select from **1** fps (lowest) to **25** fps (highest).
Priority	Quality, Bit Rate, Frame Rate	Allows you to set the maximum bit rate and/or target rate value, based on priority mode settings. This value is the threshold that you do not want the bit rate to exceed.

Select this Priority field setting	To enable this field …	To achieve this …
Quality (see *Figure 4-10*)	Maximum Bit Rate The Target Bit Rate field is grayed out.	The camera maintains the picture quality until the bit rate delivered exceeds the Maximum Bit Rate (MBR), at which point the camera drops frames to ensure that the MBR is not exceeded.
Bit Rate (see *Figure 4-10*)	Target Bit Rate The Maximum Bit Rate and Compression Ratio fields are grayed out.	The camera adjusts the picture quality to ensure that the bit rate delivered does not exceed the Target Bit Rate (TBR), at which point the camera drops frames to ensure that the TBR is not exceeded.
Frame Rate (see *Figure 4-10*)	Target Bit Rate The Maximum Bit Rate and Compression Ratio fields are grayed out.	The camera maintains the selected frame rate while adjusting image quality to meet the TBR. This mode allows the actual bit rate to fluctuate beyond the user-defined TBR.

Compression Ratio	Minimum, Low, Medium, High, Maximum	When Quality is selected as the Priority, select the Compression Ratio. **Minimum** is the highest visual quality; **Maximum** is the lowest visual quality.
Target Bit Rate (kbps)	400 – 5000 kbps	Enter the Target Bit Rate in kbps (kilobits per second) which represents the amount of data processed per second.
GOP (No. of Frames)	1– 50	Select the GOP (Group of pictures) number from **1** to **50**. (Not available on the Secondary Stream.)

Figure 4-10 Video Codec Settings

Set the Resolution for NTSC or PAL video signals.



Statistics are received for the current image in real time when **Received** is enabled.

3. Click **Apply**. Adjustments in your compression settings are captured in the statistics. As you make adjustments, the Statistics field acts as a visual reminder of how your settings affect the bit rate, frame rate, and bandwidth usage.
4. When you are satisfied with your settings—that is, that the image quality and bandwidth usage meets your requirements—click **Apply** to save your settings. Settings are not saved unless you click **Apply**.

Statistics: Received Bit Rate and Frame Rate

To view in real time the received bit rate and frame rate statistics of the current image:

1. Click the **Compression Settings** tab.
2. In the **Statistics** area, select the **Received** check box. (See *Figure 4-10*.)

   Deselecting the check box disables the refresh rate.

Note The Received check box is disabled by default. When you log out, this check box reverts to the disabled state.

Camera Setup

The Camera Setup tab provides access to the settings used to configure the camera settings for both Primary and Secondary streams. The following section explains Auto Exposure and White Balance setup.

Note You must click **Apply** after you make changes to any settings to save those changes. Settings are not saved unless you click **Apply**.

Figure 4-11 Camera Setup

Auto Exposure

The camera lens, lighting, and true day/night options can be configured as needed using the Auto Exposure settings. Use *Table 4-5* to set up Auto Exposure options.

Note You must click **Apply** after you make changes to any settings to save those changes. Settings are not saved unless you click **Apply**.

Table 4-5 Auto Exposure Settings

Setting	Options	Description
ELC (Electronic Light Compensation)	Level: 1-25	Electronic shutter control. Adjust the level until the image is neither too bright nor too dark.
ALC (Automatic Light Compensation)	DC Iris Level: 1–25	For an automatic iris lens. Adjust the DC Iris Level until the image is neither too bright nor too dark.
AGC (Automatic Gain Control)	Off, 10 dB–40 dB	Adjust the maximum value of AGC gain. AGC can be **Off**, or set to **20 dB**, **30 dB**, or **40 dB**. **Note** As AGC levels are reduced, the threshold ranges for DayToNight and NightToDay are decreased.
DNR (Digital Noise Reduction)	Off, On	Improves picture performance in low light by reducing video noise. DNR is deactivated if AGC is turned **Off**.
Flickerless	Off, On	Eliminates the “flicker” that can appear in an image under certain lighting conditions (for example, fluorescent lighting).
Digital Slow Shutter (DSS)	Off, Low, High	Automatically provides a clear image under low-light conditions (increasing magnification may cause noise/distortion).
Day/Night	Auto, Day, Night	Set the moving mechanical IR filter within the camera to ensure true 24-hour surveillance.
Night Mode	B/W or Color	Sets the color mode as **B**/**W** (monochrome) or **Color** in Night Mode. Day/Night must be set to **Night**.
Detect Time	5–60 seconds	Sets the time (**5**–**60** seconds) before the camera switches to Day or Night mode after detecting a low-light condition. Day/Night must be set to **Auto**.
DayToNight	1–7	Determines the low light detection level (**1**–**7**) when the camera switches to Night mode. The lower the value, the darker the lighting conditions must be before the camera switches. Day/Night must be set to **Auto**. **Note** The DayToNight threshold level must be set at least 2 less than the NightToDay threshold setting. **Note** The DayToNight threshold range is decreased if the AGC level is reduced.
NightToDay	3–9	Determines the low light detection level (**3**–**9**) when the camera switches to Day mode. The higher the value, the brighter the lighting conditions must be before the camera switches. Day/Night must be set to **Auto**. **Note** The NightToDay threshold range is decreased if the AGC level is reduced.

White Balance

White Balance ensures that color integrity is maintained in the camera image by compensating for the temperature color “casts” from different light sources. Use *Table 4-6* to set up White Balance options.

Note You must click **Apply** after you make changes to any settings to save those changes. Settings are not saved unless you click **Apply**.

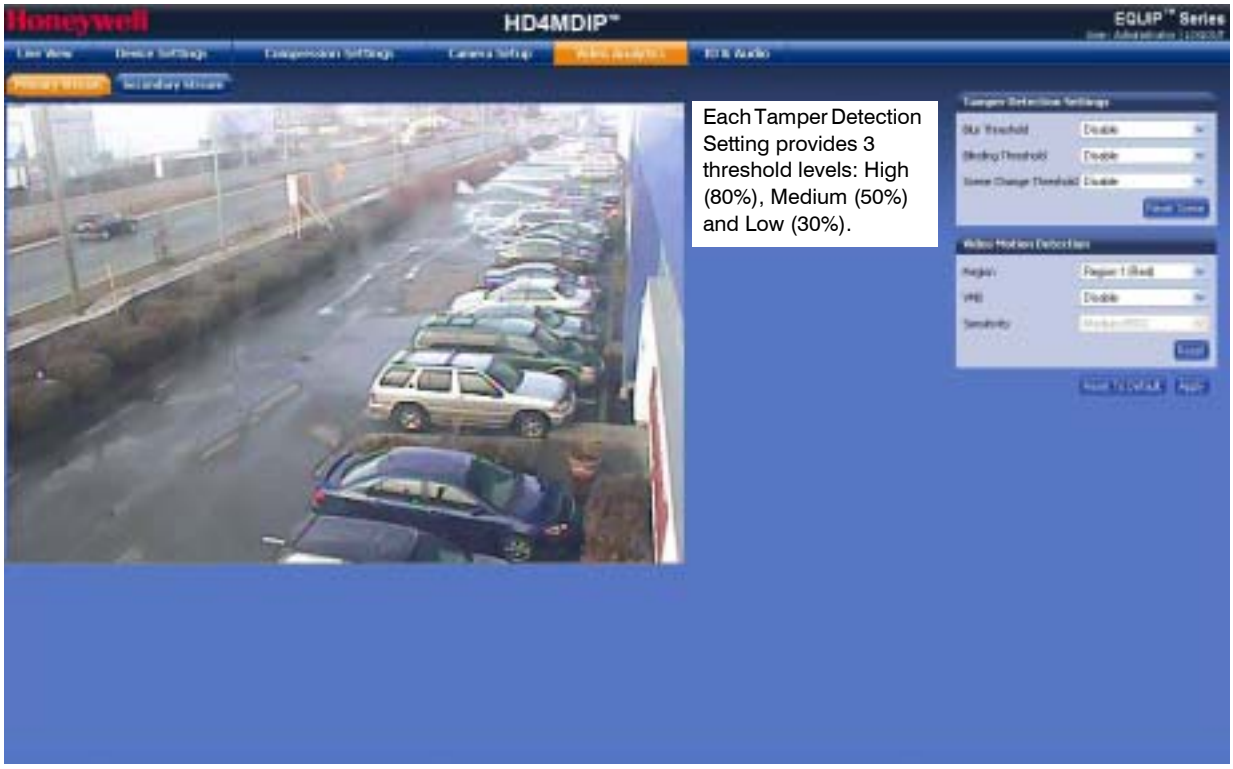
Table 4-6 White Balance Settings

Option	Description
AWC Auto (Auto White Balance Control Mode)	An automatic white balance mode that can be used in scenes which do not have constant lighting.
MWB (Manual Mode)	Manual white balance mode. Set the Red and Blue gains from **0**–**255**.
AWC Push (Auto White Balance Control Mode)	Automatically adjust the white balance to your specific environment. The use can optimize WB for the given scene by pressing and holding an adjustment button. When selected, the white balance is locked. **Note** This setting is recommended for situations in which the light conditions are constant, so that the specified color temperature does not change.

Video Analytics

In the Video Analytics window, your camera can be configured to detect camera sabotage and motion within a scene (see *Figure 4-12*). The Video Analytics tab enables a user to set the tamper detection threshold settings for blur, blinding, and scene changes.

Figure 4-12 Video Analytics Tab

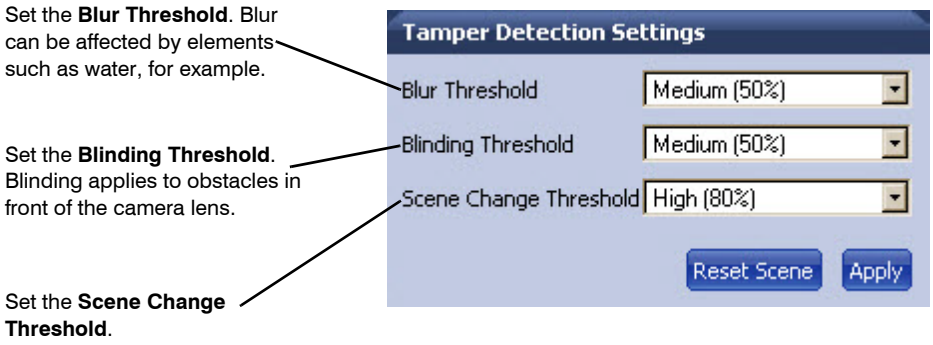


Each setting has three threshold levels: high (80%), medium (50%) and low (30%). When these thresholds are exceeded, camera sabotage or motion is detected, then alarm messages appear above the video display and alarm signals are sent to DVRs/NVRs.

Figure 4-13 Video Analytics Alarm Message

Sabotage Detection

Figure 4-14 Tamper Detection Settings on the Video Analytics Tab


Set the **Blur Threshold**. Blur can be affected by elements such as water, for example.
Set the **Blinding Threshold**. Blinding applies to obstacles in front of the camera lens.
Set the **Scene Change Threshold**.
Tamper Detection Settings
Blur Threshold
Medium (50%)
Blinding Threshold
Medium (50%)
Scene Change Threshold
High (80%)
Reset Scene
Apply

There are three types of sabotage detection in the Tamper Detection Setting pane on the Video Analytics tab: blinding the camera, blurring the video display, and tampering with the camera field of view.

Avoiding False Alarms

The user should note that when the following conditions are applicable, the tamper detection features should be manually disabled to avoid raising false alarms:

- During the configuration of the video display
- While text is overlaid on the video
- If the video display becomes too dark

Configuring Video Blur Detection

The video appears blurred when the camera is exposed to elements such as water. When this occurs, video blurring in the field of view is detected and an alarm message appears (see *Figure 4-13*) above the video display. To detect video blurring:

1. Click the **Video Analytics** tab.
2. In the **Blur Threshold** list, select one of the following options:

Table 4-7 Blur Threshold Values

Value	To detect …
High (80%)	Maximum video blurring. The alarm message appears when the video display is blurred by 80% or more.
Medium (50%)	Medium video blurring. The alarm message appears when the video display is blurred by 50% or more.
Low (30%)	Minimum video blurring. The alarm message appears when the video display is blurred by 30% or more.

3. Click **Apply**.

Note To turn off video blur detection, select **Disable** in the **Blur Threshold** list. **Disable** is the default setting.

Note You must click **Apply** after you make changes to any settings to save those changes. Settings are not saved unless you click **Apply**.

Configuring Camera Blinding Detection

An obstacle in front of the camera lens can blind the camera. When this occurs, camera blinding is detected and an alarm message appears above the video display (see *Figure 4-13*). To detect camera blinding:

1. Click the **Video Analytics** tab.
2. In the **Blinding Threshold** list, select one of the following options:

Table 4-8 Blinding Threshold Values

Value	To detect …
High (80%)	Maximum blinding. The alarm message appears when the camera is blinded by 80% or more.
Medium (50%)	Medium blinding. The alarm message appears when the camera is blinded by 50% or more.
Low (30%)	Minimum blinding. The alarm message appears when the camera is blinded by 30% or more.

3. Click **Apply**.

Note To turn off camera blind detection, select **Disable** in the **Blinding Threshold** list. **Disable** is the default setting.

Note You must click **Apply** after you make changes to any settings to save those changes. Settings are not saved unless you click **Apply**.

Configuring Camera Field of View Change Detection

The web client application can detect tampering of the camera field of view and show an alarm message above the video display (see *Figure 4-13*). To detect a camera field of view change:

1. Click the **Video Analytics** tab.
2. In the **Scene Change Threshold** list, select one of the following options:

Table 4-9 Scene Change Threshold Values

Value	To detect …
High (80%)	Maximum change in the camera field of view. The alarm message appears when tampering causes at least an 80% change in the camera field of view.
Medium (50%)	Medium change in the camera field of view. The alarm message appears when tampering causes at least a 50% change in the camera field of view.
Low (30%)	Minimum change in the camera field of view. The alarm message appears when tampering causes at least a 30% change in the camera field of view.

3. Click **Apply**.

Note To turn off camera field of view change detection, select **Disable** in the **Scene Change Threshold** list. **Disable** is the default setting.

Note You must click **Apply** after you make changes to any settings to save those changes. Settings are not saved unless you click **Apply**.

Configuring Video Motion Detection

For motion detection, an Administrator can enable and configure up to 5 zones within a scene. The enabled and configured zones will be monitored for motion.

Enabling a VMD Region

1. Click the Region drop-down menu, then select a region from the five that are available.

2. Click the VMD drop-down arrow, and select **Enable**.
   Squares that define the regions appear in their default positions on the live view video.

Figure 4-15 Video Analytics: Defining a Region

3. Click **Apply**.

Configuring a VMD Region

1. Click and drag the box to resize and place it over the area you want to monitor on the camera image.
2. Select the sensitivity level (High, Medium, Low).
3. Click **Apply**.

Note To disable a zone, click the VMD drop-down menu, then select **Disable**.

Alarm and Audio

Alarm Settings

Connect external devices such as sirens or flashing lights to the alarm output connector to signal camera users that an alarm is activated. See *Connecting Alarms* on page *26* for more information. Set the **Alarm Output** as **Normally Open** or **Normally Close**.

When alarm inputs are connected, the camera triggers an alarm only when the normal state (open or closed) changes. An alarm message appears on the web client screen (see *Figure 4-13*) to notify the operator.

Audio Settings

Your network camera supports bi-directional audio. There are two supported voice band channels that function in full duplex mode. Connect industry-standard line level audio input and output to the back of your camera. See *Connecting Audio* on page *26* for more information.

Audio configuration for your network camera is straightforward.

Figure 4-16 Audio Settings

To listen to or capture audio from the camera, enable the **Camera to Client (PC)** check box for the appropriate stream (Camera to Client (PC)). To listen to audio from the client (PC), enable the **Client (PC) to Camera** check box.

A

Troubleshooting

Technical Support

Prior to calling Honeywell technical support, refer to the following topics for possible solutions to problems with your camera. To contact the Honeywell Video Systems technical support team, call 1-800-796-2288 (North America only) or send an e-mail to HVSsupport@honeywell.com.

Any equipment returned to Honeywell Video Systems for warranty or service repair must have a Return Merchandise Authorization (RMA) number. The RMA number must be clearly marked on all return packages and internal paperwork.

Problem: Lens Out of Optical Focus

Possible solutions:

1. Verify that the lens cap has been removed from the camera.
2. This can also be caused by dirt, oil, grease, and fingerprints, and so on, that have accumulated on the lens or bubble. Check the lens and bubble, then clean them, if needed.

Caution Use extreme caution when cleaning the lens and bubble so you do not scratch their optical surfaces. Prepare a washed-out cotton cloth or lens cleaning paper with alcohol or lens cleaning liquid. Clean by moving spirally from the lens center towards its rim. Repeat until the lens is completely clean.

Problem: Failure of IP Utility Software Installation

Diable Norton AntiVirus software, then install the IP Utility software.

Problem: Live View Does Not Display the Expected Video

Possible solutions:

- Ensure that your web browser settings have been configured to allow ActiveX controls (see *Step 2: Install the Honeywell IP Utility Software* on page *34* for information on setting up your browser).
- Ensure that the network cable from the camera is connected to both the camera and the network.
- Ensure that the camera assembly board DIP switch settings are configured correctly.

Problem: Cannot Connect to a Device

When the following message (*Figure A-1*) displays in the status bar of the IP Utility, your device connection is limited. Usually this warning indicates that your PC and the device your are connecting to are on different subnets. Contact your network administrator for help to resolve your network issue(s).

Figure A-1 Limited or No Connection Message

B

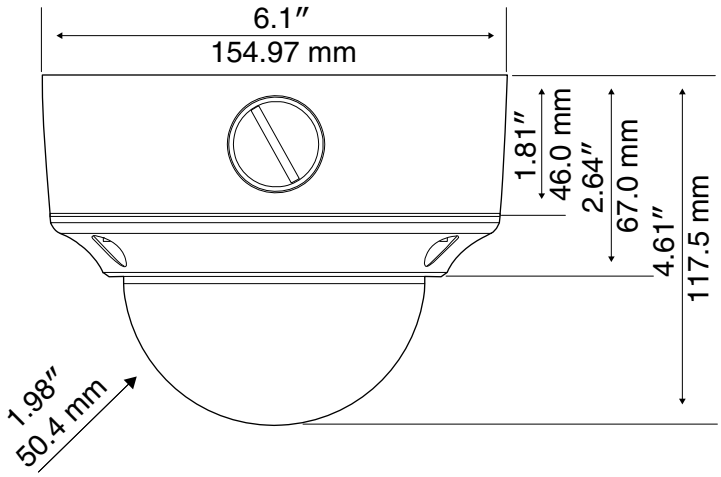
Specifications

Note These specifications refer to all models, except where otherwise noted. Specifications are subject to change without notice.

Video Signal Specifications	NTSC	PAL
Video Standard:	High Res	
Scanning System:	Progressive	
Image Sensor:	1/4” CMOS	
Number of Pixels (H x V)	1280 x 720	
Minimum Illumination: (DSS on)	0.25 lux color/0.22 lux for BW @ 50 IRE, F1.6 0.11 lux color/0.09 lux for BW @ 30 IRE, F1.6	
Video Output (local):	1.0 Vp-p @ 75 Ohms	
S/N Ratio:	50 dB or more (AGC Off)	
Auto Gain Control (AGC):	Off/On, selectable (10 – 40 dB)	
Auto Electronic Shutter (ELC):	1/60–1/100,000 sec	1/50–1/100,000 sec
Automatic Lens Iris Control:	DC Iris level 1 – 25	
White Balance (AWB):	AWC, AWC Push, Manual	
Lens Type:	True Day/Night (TDN) 3.3 mm to 12.0 mm Vari-focal Auto Iris, F1.6	
Audio Signal Specifications		
Audio/Two-Way	Line in/out	
Electrical Specifications		
Input Voltage:	24V AC, PoE IEEE 802.3 af, Class 1	
Input Voltage Range:	17–28V AC	
Surge Suppression	1.5 kW transient	
Power Consumption:	3.5 W (max)	

Mechanical	
Dimensions (WxH):	See diagram (*Figure B-1*)
Weight:	3.0 lb (1.3 Kg) camera only
Construction:	Housing: Die cast aluminum Finish: Light gray powder coating Dome: Polycarbonate
Connector:	Aux Video Output: 2-pin connector for video test cable Power Input: Removable screw terminal block Alarm I/O: Removable screw terminal block Audio I/O: Removable screw terminal block Network: RJ45 connector
Environmental	
Temperature:	Operating: -22°F to 140°F (-30°C to 60°C) Storage: -40°F to 158°F (-40°C to 70°C)
Relative Humidity:	0% to 85%, non-condensing
IP Specifications	
Video Compression	MPEG-4, MJPEG
Primary Stream Resolutions	1280 x 720 800 x 450 640 x 360 320 x 180
Primary Stream Resolutions	640 x 360 320 x 180
Software Update	Field Upgradeable
Frame Rate NTSC/PAL	Up to 30/25 fps video in all resolutions
Video Streaming	Dual Streaming: MPEG-4 and MJPEG Controllable frame rate and bandwidth Constant or variable bit rate (MPEG-4)
Security	Multiple user access levels with password protection
Users	1 Administrator or 1 Guest
Video access from web browser	Camera live view for 1 client. Full control of all camera settings available to administrator.
Minimum web browsing requirements	Pentium IV CPU 3.1 GHz or equivalent AMD 1 GB RAM Windows® 2003/XP
Installation, Management, and Maintenance	Honeywell IP Utility software identifies the IP address, checks the status of the device. Firmware upgrades over HTTP, firmware available at www.honeywellvideo.com.
Supported Protocols	HTTP, TCP, RTSP, RTP, UDP, ARP, DNS, RTCP, FTP, ICMP, DHCP, Bonjour, IGMP, Telnet
Regulatory	
EMC 2004/108/EC	
Emissions:	EN 55022
Immunity:	EN 50024
Safety:	GPSD: 2001/95/EC UL 60905-1; CSA C22.2 No.60950-1
Mounts	
HD4DIP-PK	Pendant mount bracket
HD4DIP-WK	Wall mount bracket

Figure B-1 Camera Side View with Dimensions



C

Glossary

AGC (Automatic Gain Control) Video Amplifier in a camera that boosts the amount of video gain (including the noise) to maintain a 1V p-p (1-volt peak-to-peak) video signal output. It becomes operational when the light level is low. The circuit is designed to compensate for fluctuations in scene illumination which would cause the video output level to be too low. If the video level (scene illumination) is adequate, the circuit does not apply any gain to the signal. As the video level falls, more gain is applied by the AGC circuit to the video signal.

ALC (Automatic Light Compensation) Setting in an Auto Iris lens to control the iris opening. Adjusts between peak and average to respond to the bright part of the scene (peak setting) or the average value of the video signal (average setting).

DHCP (Dynamic Host Configuration Protocol) Allows a server to dynamically assign IP addresses to nodes (workstations) automatically. Provides client information including subnetwork mask, gateway address, and DNS (Domain Address Server) addresses.

DNR (Digital Noise Reduction) Digital Noise Reduction eliminates the “flicker” that can appear in an image under certain lighting conditions (for example, fluorescent lighting).

DSS (Digital Slow Shutter) Automatically provides a clear image under low-light conditions (increasing magnification may cause noise/distortion).

Flickerless Eliminates the “flicker” that can appear in an image under certain lighting conditions (for example, fluorescent lighting). This is usually caused by the interaction of the shutter with the AC frequency of the lighting. The flickerless setting changes the camera shutter speed to a value that will not cause flicker (1/100 sec, NTSC, 1/120 sec for PAL). The side effect is that the camera sensitivity is reduced because the electronic iris feature has effectively been turned off and will no longer control the optimum exposure setting for available light conditions.

FOV (Field of View) The part of the scene visible with a particular lens. The height (horizontal) and width (vertical) picture size at a given distance that can be seen through a lens. Generally, shorter focal length lenses have a wider field of view than those with longer focal lengths.

Gain The amplification a system provides to a signal.

IP Address A unique, 32-bit identifier for a specific TCP/IP host computer on a network.

Iris Adjust Adjusts the iris to either open or close in response to changing light conditions.

NTSC (National Television Standards Committee) A standard of specifications for television transmission in the U.S., Canada, Japan, Central American, and half of South America. The North American system uses interlaced scans and 525 horizontal lines per frame at 30 frames per second.

PAL (Phase Alternate Line) A standard of specifications for television transmission for color TV signals used in West Germany, England, Holland, Australia, and several other countries. It uses an interlaced format with 625 lines per frame at 25 frames per second.

PoE (Power over Ethernet) A system designed to transmit electrical power, along with data, to remote devices over a standard twisted pair cable in an Ethernet network.

Shutter Speed The speed at which the charge is read out from the CCD chip. Adjusts the light sensitivity of the camera. A faster (briefer) shutter speed can arrest the motion of a fast moving object (reduce image blur), rendering it sharp. Fast shutter speeds allow less light to all on the CCD and can darken the image. For fast shutter speeds, ensure there is adequate lighting. Usually selected using DIP switches on the side of the camera.

Subnet Mask A number used to identify a subnetwork so that an IP address can be shared on a LAN.

True Day/Night The incorporation of a moving mechanical IR filter within the camera ensures true 24 hour surveillance, providing high quality color images during the day and similar quality black & white images at night when used with IR lighting.

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